

AMENDMENT UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2616
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q71917

Christoph OCHSNER

Appln. No.: 10/262,834

Group Art Unit: 2616

Confirmation No.: 4684

Examiner: Min Jung

Filed: October 3, 2002

For: NETWORK NODES

AMENDMENT UNDER 37 C.F.R. § 1.116

MAIL STOP AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated April 3, 2007, please amend the above-identified application as follows on the accompanying pages.

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for transmission of data via a communication network the method comprising:

receiving, at a network node connected with two or more terminals, a data stream from the communication network, wherein the data stream comprises useful data and protocol data;

removing, at the network node, ~~a majority of the protocol data of a portion of protocol layers~~ from the received data stream; and

switching the remaining data stream to be transmitted one of the terminals,
wherein the communication network is a bus system.

2. (currently amended): The method according to claim 1, wherein the removing the ~~majority of the protocol data comprises processing and removing protocol data of~~ communication protocols of layers 1 to 4 for the terminals connected to the network node.

3. (previously presented): The method according to claim 1, wherein the network node communicates with the communication network via a multiple access protocol and the network node communicates with the terminals via a point-to-point protocol.

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4. (previously presented): The method according to claim 1, wherein a scope of the protocol data of the remaining stream is reduced by more than half in comparison with a scope of the protocol data of the received data stream.

5. (currently amended): A network node comprising:
a first interface for connecting the network node with two or more terminals;
a second interface for connecting the network node with a communication network; and
~~a control unit which is configured to remove removes a majority of protocol data from a portion of protocol layers~~ from a data stream received from the communication network via the second interface, the data stream comprising useful data and ~~the~~ protocol data, and ~~to switch the switches~~ a remaining data stream to be transmitted to ~~a terminal one~~ of the terminals via the first interface,
wherein the communication network is a bus system.

6. (currently amended): The network node according to claim 5, wherein the control device ~~is configured to process and remove removes~~ the protocol data of communication protocols of layers 1 to 4 for the terminals connected with the network node and ~~to switch switches~~ the remaining data stream reduced by the protocol data of the communication protocols of the layers 1 to 4 to the terminal concerned be transmitted the one of the terminals.

7. (previously presented): The network node according to claim 5, wherein the control device is also configured to transmit the remaining data stream to the terminal via a point-to-point protocol.

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8. (new): The method according to claim 2, wherein the protocol data is structured according to an Open Systems Interconnection (OSI) model comprising the layers 1 to 4.

9. (new): The method according to claim 6, wherein the protocol data is structured according to an Open Systems Interconnection (OSI) model comprising the layers 1 to 4.

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REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-9 are all the claims pending in the application, as claims 8 and 9 are hereby added.

Applicant submits the claims define patentable subject matter.

New Claims

Applicant herein adds new claims 8 and 9 which recite the protocol data is structured according to an Open Systems Interconnection (OSI) model comprising the layers 1 to 4.

Support for new claims 8 and 9 can be found, for example, on page 8 of the Specification.

Claim Rejections - 35 U.S.C. § 112

Claims 1-7 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

In response to the arguments submitted January 3, 2007, the Examiner asserts that the claim language “the removing the majority of the protocol data comprises processing and removing protocol data” is vague. The Examiner further asserts the meaning of the term “majority” is not disclosed, and thus, it cannot be determined what exactly is being removed. Applicant herein amends the claims to recite “a portion” instead of “a majority,” and submits the term “a portion is in compliance with the enablement requirement of 35 U.S.C. § 112, first paragraph.

In particular, the Specification specifically describes removing protocol data related to the particular layers of the Open System Interconnection (OSI) model, for example, with regard to the TCP/UDP protocol. For example, page 7 of the Specification states:

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Overall good results are achieved if the network nodes process the communication protocols of layers 1 to 4 for the terminals connected to them.¹

Thus, regarding the removal of “a portion” of the protocol data, refers to the removal of the data from protocol layers 1-4 of the OSI model, and further the “portion” removed refers to the portion of the protocol layers, i.e., layers 1-4, out of the seven layers of the OSI model.

Additionally, the Specification also describes the processing of different protocol layers:

The protocol processing units PL1 and PL2 then process the protocol data of MAC protocols (MAC = medium access control) such as an Ethernet protocol, the DQDB protocol or a Token protocol.

The protocol processing units PL3 and PL4 then for example process the IP protocol (IP = internet protocol) or the TCP/UDP protocol (transmission control protocol, user datagram protocol).²

Thus, in this example, protocol data, i.e., MAC protocols, such as an Ethernet protocol, the DQDB protocol or a Token protocol. IP protocol (IP = internet protocol) or the TCP/UDP protocol, of a portion of protocol layers are processed.

Accordingly, Applicant submits the Specification provides enabling support for the claimed features, removing, at the network node, the protocol data of a portion of protocol layers from the received data stream.

¹ See Specification, page 7, third full paragraph.

² See Specification, page 8, second and third full paragraphs.

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Additionally, the Examiner states that it is not clear of the claimed term “processing” is the same function as the “removing.” Applicant submits the Examiner’s rejection with regard to the term “processing” is obviated by the amendment made herein.

With further regard to “processing,” the Examiner also states that “[i]t seems that the invention need[s] to include some further processing of overhead information rather than simply removing the protocol data.” Applicant respectfully disagrees with the Examiner’s position.

As noted above, the claimed invention removes a portion of the protocol data. Thus, the removing of the protocol data from a portion of protocol layers does not require any “further processing” as the Examiner suggests. On the contrary, as pointed out above, protocol data related to layers 1-4 of the OSI model, for example, are simply removed from the data stream. Thus, Applicant submits the above-cited portions of the Specification, *inter alia*, plainly provide enabling support for this feature of the claimed invention.

In view of the above, Applicant respectfully requests the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 112, first paragraph.

Claim Rejections - 35 U.S.C. § 102

Claims 1 and 5 are rejected under 35 U.S.C. § 102(e) as being anticipated by Huitema et al. (U.S. Pat. App. Pub. No. 2002/0073215; hereinafter “Huitema”). Applicant respectfully traverses this rejection.

Independent claim 1 recites, in part:

receiving, at a network node connected with two or more terminals, a data stream from the communication network, wherein the data stream comprises useful data and protocol data;

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removing, at the network node, the protocol data of a portion of protocol layers from the received data stream; and
switching the remaining data stream to be transmitted one of the terminals,
wherein the communication network is a bus system.

The Examiner asserts that Huitema discloses all of the features of the claimed invention. Specifically, the Examiner argues that Huitema discloses receiving a data stream by a network node (i.e., a DSL modem 390 and an IPc4/IPv6 filter 410),³ removing “some”⁴ of the protocol data from the data stream at the alleged network node (i.e., by removing all IPv4-related data from the packet), and switching the remaining data in the direction of a terminal.

However, Huitema does not disclose the protocol data of a portion of protocol layers. On the contrary, Huitema simply removes data from a single protocol layer, i.e., IPv4. Thus, since Huitema contemplates removing data from only one protocol layer, Applicant submits Huitema fails to teach or suggest removing protocol data of a portion of protocol layers.

Furthermore, the Examiner cites paragraphs [0023]-[0025] of Huitema as allegedly disclosing a method for transmission of data via a communication network to a terminal as recited in claim 1. The cited portion states: “encapsulated … data packet traffic … are directed through the Internet … communications modem can be any modem or communications device capable of signal conversion … [c]ommunication modem … delivers, via connection … encapsulated … data packet traffic … [to the corresponding] filter device.” However, Huitema

³ See Huitema, FIG. 3.

⁴ See Office Action, page 3, item 4.

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does not teach or suggest that “the communication network is a bus system,” as claim 1 requires. Indeed, Huitema is completely silent on such a feature.

Accordingly, Applicant submits independent claims 1 and 5 are patentable over Huitema for at least these reasons.

Claim Rejections - 35 U.S.C. § 103

Claims 2-4 and 6-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Huitema in view of Jonsson et al. (U.S. Pat. App. Pub. No. 2002/0146000; hereinafter “Jonsson”). Applicant respectfully traverses this rejection.

With regard to the rejection of claims 2-4, 6 and 7, Applicant submits Jonsson fails to cure the deficiency of Huitema noted above. Thus, Applicant submits dependent claims 2-4, 6 and 7 are patentable over the cited references, at least by virtue of their respective dependency on independent claims 1 and 5.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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